

Southern Regional Research Laboratory
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To: Director and Laboratory Staff
From: Survey and Appraisal Section, Cotton Processing Division
Subject: SURVEY NOTES

L I N T C O T T O N

PRICE RELATIONSHIP BETWEEN COTTON AND RAYON CHANGED

The other rayon producers followed DuPont (see last month's Survey Notes) in increasing rayon prices by about 10 percent, with American Viscose Corporation raising the price of viscose staple from 32 cents to 36 cents per pound. Because of the increase in cotton prices, rayon continued to have a substantial price advantage. Mill margins on print cloths increased still further during November, but narrowed for other cotton fabrics.

Table 1.- Prices of raw cotton, rayon staple, and cotton fabrics, and cotton mill margins in cents

	January 8, 1948	November 1947	October 1947	November 1946	Average 1939-40
Cotton, Middling 15/16"	:	:	:	:	:
delivered at mills, lb.	: 36.80	: 34.96	: 32.88	: 32.20	: 11.01
Rayon, viscose staple,	:	:	:	:	:
equivalent price 1/, lb.	: 32.04	: 28.48	: 28.48	: 24.03	: 22.25
Cotton fabrics, average	:	:	:	:	:
17 constructions 2/	: -	: 92.76	: 89.96	: 70.99	: 22.86
Mill margins 3/	:	:	:	:	:
Average, 17 cotton fabrics	: -	: 59.43	: 58.60	: 40.52	: 12.68
Average, 6 printcloths	: -	: 97.09	: 92.65	: 47.19	: 10.55
Average, 3 sheetings	: -	: 42.12	: 42.62	: 33.41	: 9.60
Average, 4 drills	: -	: 32.37	: 33.19	: 32.71	: 9.90
Average, 2 ducks	: -	: 31.30	: 33.23	: 33.82	: 13.10
	:	:	:	:	:

1/ Cost to mill of same amount of usable fiber as supplied by one pound of cotton (rayon price x .89).

2/ Price of approximate quantity of cloth obtainable from a pound of cotton with adjustments for saleable wastes.

3/ Difference between cloth prices and prices (10 market average) of cotton assumed to be used in each kind of cloth.

COTTON MILLS SWITCH TO LIGHTER FABRICS

Although cotton consumption in November was 119,000 bales less than a year ago, the spindle hours were slightly greater. According to the Journal of Commerce, December 30 (page 12), the declining consumption of cotton has been accompanied by a rising production of cotton cloth with a steady switch-over to lighter fabrics such as light weight printcloth yarn fabrics and sheetings away from war fabrics such as drills and ducks. This reconversion was very extensive in the third quarter but should "settle down" in the fourth quarter.

Table 2.- Cotton consumption and stocks, and spindle hours in cotton mills

	: November :	October :	November :	November
	: 1947 :	1947 :	: 1946 :	: 1940
Consumption, bales	: 759,498 :	826,216 :	878,025 :	741,170
On hand, 1000 bales	: 7,220 :	6,580 :	8,326 :	16,411
Active spindle hours, billions	: 9.5 :	10.8 :	9.5 :	8.6
Spindle activity, percent of	: :	:	:	:
80-hour capacity	: 120.6 :	122.9 :	119.6 :	105.7
	: :	:	:	:

MASS PRODUCTION OF COTTON PICKERS BEGINS

Production of mechanical cotton pickers at International Harvester's Memphis works was to get underway in January with 1,500 of these machines the goal for 1948, Adam Condo, works manager, announced. These will be the first mechanical pickers produced on the assembly line method, Mr. Condo said, they have been built virtually by hand in the past.

The Cotton Trade Journal, Dec. 12, 1947, p. 10

COTTON STALK YIELDS CATTLE FEED IN VALLEY

Gilbert C. Wilson of Lee and Wilson Industries at McAllen, Texas, revealed at a recent area conference of the Texas Chemurgic Council that his firm planned to dehydrate stalks from 4,000 acres of cotton during 1948 for the production of cattle feed. Mr. Wilson said that it had been determined that Rio Grande Valley cotton fields would yield a ton of dehydrated feed to the acre, worth around \$45 a ton. The feed, he said, will contain about ten percent protein and 45 percent carbohydrates. A higher value feed can be produced by sifting out the fiber. The fiber can be used to make brown paper or cardboard. Mr. Wilson said the feed will be produced at the firm's Raymondville plant in the Valley.

The Cotton Trade Journal, Dec. 26, 1947, p. 6

MECHANIZED COTTON RAISED AT 8 CENTS A POUND IN 1947

Mr. Price McLemore, one of the leading exponents of mechanized agriculture in the South employed only 4 men on his 2,000 acre farm in the eastern hilly section of the cotton belt in 1947, raising cotton for 8 cents a pound. He raised 300 acres of cotton and also 100 acres of oats, 100 acres of corn, and 125 acres of grain soybeans. Ten or 15 years ago, a farm of similar size probably would have had 500 to 600 acres of cotton and would have required from 60 to 65 field hands to work it.

Daily News Record, Dec. 27, 1947, p. 4

MILLS CRITICALLY SHORT ON LONG STAPLE COTTON

It is estimated by the trade that American mills will need 500,000 bales of long staple cotton this cotton year, with only 280,000 bales produced domestically in this year's crop. On September 20 the Department of Agriculture

set import quotas of 91,313 bales of Egyptian cotton "and had these all taken up in one day." The possibility of mills having to stop for lack of this cotton is said to be "becoming more real everyday" but little hope is held for early raising of import quotas—Southern growers are against it—or for increased domestic production.

Journal of Commerce, Dec. 24, 1947, p. 12

PROPOSED COTTON EXPORTS UNDER MARSHALL PLAN GIVEN

The State Department has released statistical breakdowns of what this country can supply under the Marshall plan. Export of a total of 10,723,000 bales of cotton through 1952, with 780,000 bales for April to June 1948, and 2,400,000 bales during 1948-49 is called for. Very little, if any, wool would be exported.

Daily News Record, Jan. 8, 1947, p. 1.

C O T T O N T E X T I L E I N D U S T R Y

TEXTRON BUILDS PRINTCLOTH MILL IN PUERTO RICO

Textron is setting up a mill in Puerto Rico to be known as Textron Puerto Rico. It will have 24,000 spindles and 520 Draper looms to weave 40-inch printcloths. The mill will cost \$120^{a spindle}/with machinery scheduled for shipment for the third and fourth quarters of 1948. Royal Little "is screening carefully a group of young University of Puerto Rico graduates—the final selectees will be brought to the American Textron mills for training before going back to the completed mill." From a survey in Mexico and at Barranquilla, it is expected that the mill will operate with native help at 80% of the efficiency of American mills. "Since the products will be tax free and since half of the (building) notes will be non-interest bearing, it seems that Puerto Rico will be in a nice competitive position."

American Wool & Cotton Reporter, Dec. 25, 1947, p. 24

F.N.F. SELLING COURTAULDS' WARPER FOR TRICOT KNIT MACHINE

F.N.F., Ltd., manufacturer of the 1,000 course a minute tricot knitting machine, is placing on the world market a beaming machine, called the Cascade Warper, developed by Courtaulds for its own use 12 years ago. The machine is said to wind "very long lengths of yarn" on beams to allow highest machine productivity.

Daily News Record, Dec. 29, 1947, p. 1

C O T T O N P R O D U C T S

COTTON AND PAPER COMBINED IN NEW BAG

A revolutionary new paper bag designed for use in pre-packaging bulk fruits and fresh vegetables at the shipping point, has been announced by Union Bag and Paper Corporation, called Vent-Vu. It is made of wet strength paper, which can absorb moisture without breaking. The unusual feature of the new bag is a "window" of cotton mesh through which the contents can be seen. The new bag, according to Union Bag & Paper officials, combines for the first time in one container all the advantages of product protection, visibility, air

circulation, and clearly printed brand identification. The new bags are entirely machine made of two or more layers of paper on high speed bag machines, and printed at the same time. This is believed to be the first time cotton mesh and kraft paper have been combined to form a flexible container. Special machines were designed and built to perform this operation. A special moisture-resistant adhesive was developed to bond the mesh strands securely between the paper walls, making the mesh virtually an integral part of the bag.

Daily Mill Stock Reporter, Dec. 27, 1947, p. 11.

COMPETITIVE MATERIALS

OTHER COMPANIES FOLLOW DUPONT IN RAYON PRICE RAISE. PRICES REMAIN SAME FOR 2200 DENIER TIRE YARN AND FOR ACETATE STAPLE

The other rayon producers generally have increased prices within the last month, following DuPont's price change early in December. American Viscose's prices for viscose rayons and Celanese's prices for acetate rayons are shown below. Note that the price of 1100 denier tire yarn was increased 2 cents per pound but the price of 2200 denier tire yarn remained unchanged. DuPont's price for 1100 denier was same as American Viscose's, but was 1 cent higher for 1650 denier (which they make in 720 filaments), and 2 cents higher for 2200 denier. Industrial made no change in tire yarn prices, and thus have a price 2 cents under American Viscose for 1100 denier.

Viscose staple regular bright now sells for 36 cents per pound for American Viscose and 37 cents for DuPont. Acetate staple prices remained unchanged, and are now only 12 cents higher than viscose, only 7 cents higher than M 15/16 inch cotton.

As noted in the table, American Viscose sells 1100 denier tire cord fabric for 69 cents per pound, 2200 denier fabric for 65 cents per pound. We do not have comparable cotton quotations at this time.

Table 3.- Rayon prices per pound December 1947, with increases over old quotations and comparable cotton prices

Type and size (for yarns, total denier and number of filaments)	December 1947 price Cents	Increase over January price Cents	Comparable cotton price Cents
<u>Viscose staple</u>			
Regular, bright	36	+4)
Regular, dull	37	+4)
Short staple blend, bright.	39)
Short staple blend, dull.	40)
Extra strength - 1.5 denier and coarser	38		) 41 1/
Extra strength - 1.0 and 1.25 denier.	39)
Crimped, bright	37)
Crimped, dull	38)
<u>Viscose tow</u>			
Tow (grouped continuous filament)			
bright-180,000 total denier and			
heavier	38	38	
<u>Viscose tire yarn and fabric</u>			
1100/490 cones, tubes, beams.	55	+2	) 65 2/
1650/980 cones, tubes, beams.	53	+1)
2280/980 cones, tubes, beams.	51	0)
1100/490 fabric	69)
1650/980 fabric	67)
2200/980 fabric	65)
<u>Viscose yarn</u>			
40/14 cones	175	+10)
100/40 bright cones	94	+8)
150/40 bright cones	74	+7	) 84 3/
150/40 medium strength.	77	+7)
300/44 bright cones	59	+4	) 73 4/
<u>Acetate yarn</u>			
45/13 cones, cheeses.	130	+10)
100/26 cones, cheeses	91	+ 7)
150/40 cones, cheeses	74	+ 7	) 84 3/
300/80 cones, cheeses	70	+ 5	) 73 4/
<u>Acetate staple fiber</u>			
Up to 8 denier per filament	48	0)
Over 8 denier per filament.	50	0	) 41 1/

- 1/ Mill price of M 15/16" cotton as of January 9, 1947, divided by .89 to allow for waste and tare.
- 2/ 1100 denier is equivalent to 4.8s cotton count. This is price of 4s carded cotton yarn. However, this is not a cotton yarn size used for tires.
- 3/ 30s single carded yarn.
- 4/ 18s single carded yarn.

NEW RAYON PLANTS POSTPONED BECAUSE OF HIGH COSTS

Building costs are said to have set back plans of some rayon producers for construction of new plants. Where there used to be a rule-of-thumb for calculating costs of rayon yarn plants at \$1 per pound to 1 year, this figure is now up to at least \$2. Some producers who have inspected sites for new plants have stopped at the blueprint stages and construction of one viscose staple plant, for which a site had been procured, is now reported on the shelf indefinitely.

Daily News Record, Dec. 11, 1947, p. 18.

(A cost of \$1.75 per pound of rayon capacity was mentioned by a current visitor to the Laboratory.)

RAYON INDUSTRY MAY ACT TO IMPROVE SEWING OF RAYON GARMENTS

One of the points brought out by the Bureau of Agricultural Economics's study of preferences of 1,782 women for cotton and rayon was that rayon pulled out and frayed at the seams more readily. According to a statement in the Daily News Record, the B.A.E.'s study may have done the rayon industry a service in calling attention to this deficiency. It was stated that the rayon industry should disseminate more information about how to sew rayon fabrics and that a reliable body of data on this subject should be secured.

Daily News Record, Jan. 5, 1947, p. 28.

BETTER ACETATE DYES EXPECTED

According to J. B. Goldberg, research director for J. P. Stevens, "In the field of dyeing, it is reasonably certain that there will soon be acetate dyestuffs which no longer "blush" at the sight of atmospheric gases. Some may show slight changes in depth of shade, but they will be definite improvement over many previously used dyestuffs. Others may incorporate inhibitors to accomplish the same resistance to change of shade, eliminating the need for an extra treatment by the dyer. Also, in acetate dyeing, further commercial application of vat dyestuffs without saponification is to be expected."

Journal of Commerce, Jan. 8, 1948, p. 14.

JAPANESE RAYON INCREASE PLANNED

SCAP (Supreme Commander for Allied Powers) is attempting to increase Japan's rayon production to a total of 308 million pounds (equivalent in weight to 642.0 thousand bales of cotton) of rayon per year, with an export goal of 90 million pounds (60 million pounds of yarn; 30 million pounds of staple). Japan's peak output in 1938 was 541.1 million pounds; in 1946 it was 29.5 million pounds. It is thought that with considerable improvement in supply of materials and in other factors, the desired capacity expansion can be accomplished in a few years.

Daily News Record, Dec. 19, 1947, p. 1.

BURLINGTON MILLS PROMOTING RAYON SUMMER SUITS

Burlington Mills is at present conducting a big advertising campaign to promote men's rayon summer suitings. An unusual full-color 4-page "ad" in the

Daily News Record (Dec. 16, 1947) states that "1948's finest summer suits will be made of these Burlington men's rayon (combination of viscose and acetate yarns) suitings and they won't be exported." The rayon fabrics are said to be "Mirror-clear Glen plaids", "expensive weaves heretofore restricted to custom trade", with "Color and weave effects possible in natural fibers only at eyebrow-raising prices. "Scientific wrinkle-resistance that's impregnated into the very fibers" is said to provide an "Appleskin" finish that keeps the fabric as taut and smooth as a prize Baldwin. The fabrics are said to be pucker-proof ("rayon fibers can't absorb enough moisture to ruffle serenity of fabric"). "They don't stretch, hold, or cling," are "strictly starvation for moths."

USE OF RAYON IN SUMMER SUITS INCREASES

In face of shortage of tropical worsteds, use of all-rayon and rayon blends is expected to reach new highs in 1948. "Improvement in the texture and styling of spun rayon suitings has been one of the prime factors in their success. Since the war ended, leading weavers and finishers have gone a long way in making rayons washable, shrink-proof and crease-resistant . . . and lately they are being made fast to gas and sun fading." According to a survey made by Fairchild's publications, following changes in summer suits will take place:

	<u>National Average 1947</u>	<u>1948 Forecast</u>
Tropical worsted	40.8	33.1
Worsted gabardines	18.2	18.9
Mohair - cotton mix, including		
Palm Beach	11.6	10.5
All rayon	8.6	) 25 - 30
Rayon blends	9.4	
Cotton seersucker.	2.8	?
Cotton cords	1.2	?
All others (including rayon cords).	6.3	?

Most rayon suits (74%) sold in the \$27.50 - \$35.00 price range last year as compared with \$45, \$50, and \$55 for a "major part" of worsted gabardines and \$35, \$40, and \$45 for tropical worsteds.

Daily News Record, Dec. 30, 1947, p. 3.

SILK PRICES CUT MORE THAN 40 PERCENT

Government-controlled prices for Japanese raw silk were cut more than 40 percent effective January 1, 1948, with the new price schedule effective for a full year. AAA 94% silk is now \$3.25 as compared with \$5.60, while D grade silk is now \$2.45 as compared with \$4.50.

Daily News Record, Dec. 11, 1947, p. 1.

According to the trade, the decline in silk prices will greatly increase the output of \$2.00 and \$2.50 silk ties and synthetics may be "wiped out" in ties above \$2.00. Production of silk pajamas and robes also may be increased.

Daily News Record, Dec. 17, 1947, p. 11.

JAPANESE DEVELOP BETTER RAW SILK

Development of a new raw silk, said to be superior to the present type being manufactured in Japan, was reported by the Gunze Silk Reeling Co. A report from Nagoya, published by the Silk Digest, official organ of the Board of the Raw Silk Industry, said that the Gunze mill had begun production of the new silk with 30,000 "kan" (8.27 pounds) of the so-called "three-sleep cocoons. The new cocoon is so-called because the worm goes through three stages of development instead of the four stages experienced by the presently-produced silkworm. The rearing period required for the three-sleep worms is considerably shorter than that needed for the four-time ones. The quality of the yarn spun from the cocoons produced by the former is much superior, with more elasticity and less size deviation. Moreover, the filament is much more beautiful, the managers said. "The three-sleep cocoon has a total spin of 1,197 meters, a 1.96 denier size filament, a non-breaking length of filament of 1,096 meters and a 'reelability' of 92 percent."

Journal of Commerce, Dec. 30, 1947, p.12.

SILK PROMOTION PLANS NOTED

The U. S. Commercial Company has spent through an advertising agency about \$23,500 to promote silk, of which \$15,000 is being spent on a current survey of silk's potential market and \$8,500 on publicity—primarily on planting stories in periodicals, etc., boosting silk. The money has come from proceeds of raw silk sales by USCC. The advertising agency also has sent representatives to Paris to promote the use of silk by Parisian dressmakers.

Journal of Commerce, Dec. 24, 1947, p. 12.

NEW RAMIE COMBINE TO BE TRIED IN FLORIDA EVERGLADES

Sea Island Mills has taken delivery on a new 15-ton "Siland Combine Decorticator," designed to strip fibers from ramie stalks at the rate of 15 acres in an 8-hour day. "It is expected that fiber recovery will be almost complete as compared with 20 to 30 percent waste on present equipment. The new decorticator is 34 feet long, exclusive of the separate harvester, and 10 feet, 2 inches wide. It is set on two pairs of caterpillar treads. Four rollers strip the bark from the ramie plants, remove the pith from its center, and deliver the fibers in bundles at the exit end of the machine."

Daily News Record, Dec. 19, 1947, p. 1.

PROTEIN FIBERS BEING DEVELOPED BY MANY; ARALAC SAID TO BE "NOT MAKING GOOD"; SOYBEAN FIBER IN PILOT PLANT STAGE

Drackett Co. is producing soybean fiber on a pilot plant basis and has samples of it running in a considerable number of mills. All of it is 3-denier in size because "that was the only spinneret they could purchase under current boom conditions." Dupont is now working with England's protein fiber (they have a technical exchange agreement with Imperial Chemical Industry). "We have also been told that American Viscose is working on a protein fiber." Aralac, however, is said to be "not making good." Only mill in New England using it is said to be Edwards Mill of Augusta, Maine, which is using it "chiefly on napped goods, and in an interlining fabric" where "a ratio of Aralac is incorporated." The latter fabric is made on a cotton system basis with a price radically lower than the woolen-made article.

Brighton Mills, Shannon, Georgia, is said to be perhaps the largest user, using it in blends. Burlington and Callaway are said to have tried it and quit. (It is said in rebuttal that Edward's has a monopoly on the interlining, that Aralac has been used in large quantities by Ponemah and West Point, Etc., in fancy dress fabrics as changing styles have demanded it.)

Casein sold for 16 cents before the war and the fiber sold for 64 cents. Now casein sells for 50 cents and Aralac for 75 cents, but the Aralac Company is said to be losing money on it. At its present price, Aralac has an advantage over Australian wools but not over other "good wools and wool stocks (meaning re-used wool)—100 percent wool—at lower quotations. Although it has been given "tremendous" publicity, present production of 100,000 pounds a week is very small considering size of markets in textile industry.

Aralac has made considerable progress in quality, regularity, strength, etc. It is said to dye more uniformly than wool, to be slightly weaker than wool in a normal state, and "quite a little" weaker than wool when wet.

American Wool & Cotton Reporter, Dec. 25, 1947, p. 1.

NYLON ENTERING MANY INDUSTRIAL USES NOW HELD BY COTTON

Among industrial uses of nylon are:

- Laundry nets - Said to weigh one-fourth as much, to last four times as long
- Laundry bags - Stand up better under "king-size" safety pins.
- Press cloths - Last "far beyond ordinary life of cloth, formerly used," and "look no worse for wear" except for a slight brownish tinge.
- Rope - As a "mule spinner" rope it lasted 9 times as long as "standard rope." Nylon yacht ropes and mooring lines retained 85 to 90% of their strength after two or three seasons. Also used for lariats and "signal cord."
- Twine - Plymouth Cordage has completed tests on nylon "heading twine" for the net ends of lobster traps, and reports that it withstands many more hours of immersion than any twine formerly used, and shows good resistance to marine growth.
- Filter cloth - Said to last 4 to 5 times longer and to increase output in gluten-thickness process in cord products refineries.
- Tires - Nylon "breaker strips" being advertised. One manufacturer recently has announced that nylon cord passenger car tires are available.
- Garden hose - Reported to be half the weight of ordinary hose, kinkless, strong, and long wearing. Made by Gates.
- Tests - For fumigation tents for citrus industry. Said to be lighter, easier to transport, undamaged by mildew, absorbs less moisture.

From DuPont Magazine as quoted in
Chemurgic Digest, Nov. 30, 1947, p. 337.

NYLON BOLTING CLOTH DEVELOPED

Nylon's "great strength and resistance to abrasion and deterioration when wet" has led to a "woven bolting cloth that lasted many times longer than the silk formerly used." Experiments began early in World War II with Clinton Industries, Clinton, Iowa, taking the lead. Much of the corn ground by the wet corn mill industry is now said to be sieved and filtered through nylon fabric.

DuPont's Agricultural News Letter, Nov.-Dec. 1947, p. 104

NEW ELASTIC YARN FORMED OF NYLON

A new yarn of nylon thread having an unusual amount of elasticity due to the formation of the thread into a spring has been developed by the Dörgin Textile Corp., A. L. Dörgin, president of the company, announced yesterday. At present, the yarn, Rekoylon, is in limited production as the multiple uses to which it can be put are still in the experimental stage, it was reported. Elasticity is said to be retained even after being boiled. Currently, manufacturers of ribbon straps for lingerie, knit wristlets and anklets for heavy outerwear, bathing suits and other knitted sportswear are interested in the yarn's properties.

Journal of Commerce, N.Y., Dec. 22, 1947, p. 16

WRRL PECTINATE FIBERS DISCUSSED

In an article entitled "Pectinates--Promising Food and Industrial Materials," W. D. McClay and H. S. Owens, WRRL, discuss pectinate fibers as follows: To form metallic pectinate fibers, a 3% solution of sodium hydrogen pectinate is forced through a candle filter and thence pumped through a spinneret which is immersed in a coagulating solution of the salt of a metal of the desired type of fiber. The fiber is then washed with water to remove excess salt and stretched during drying. Calcium pectinate yarns of 25 filaments and stretched 100 percent during drying exhibit excellent molecular orientation, have strengths as high as 2.9 grams per denier, and extensibilities of 6 to 9 percent. Fibers of other pectinates such as zinc with strengths of these pectinate fibers are about 20 percent of their dry strengths. Possibly this defect can be remedied to some degree through formation of other pectinate salts such as those of chromium and beryllium. The latter salts of alginic acid have been used to make a stable yarn. The two outstanding properties of other pectinate fibers are their nonflammability and the ease of solubilization of their salts. The former property indicates their possible use in the manufacture of draperies and other specialty fabrics. Treatment of a calcium pectinate fiber or film with a calcium-sequestering agent such as sodium polymetaphosphate or polyphosphate converts it into soluble sodium salt. Thus, calcium pectinate yarns might be used as a scaffolding material in conjunction with other yarns such as wool or cotton and removed after weaving by means of a pectinate-solubilizing scour.

Chemurgic Digest, Nov. 30, 1947, p. 325.

IMPORTS OF JUTE MANUFACTURES AT HIGH LEVELS BUT DECLINE IS EXPECTED

Burlap is the principal textile product imported into the United States, even outranking imports of cotton and wool manufactures. Besides burlap,

much smaller quantities of other jute products, including bags, bagging, yarns, and cordage, are also brought into this country. All of these materials are in direct competition with similar cotton products.

Imports of burlap and of all jute manufactures are given in table 4. As is indicated, they were at relatively high levels last summer following smaller totals during April - June. However, future imports of these materials may be disturbed by present troubles in India. According to the Cotton Trade Journal (Jan. 2, 1948), the United States is now getting less jute bagging than a year ago, although our need for it is increasing. "It is possible that a portion of the next crop may be packaged with cotton bagging such as certain mills made a specialty of producing some years ago when the jute market became tight. For many years there have been spasmodic efforts to wrap cotton bales with a cotton bagging . . . But this season, with a shortage of raw cotton looming up, little is heard about it." Cotton ginner, it is stated, will have to compete with other users of bagging for the supply. Settlement of India's strife seems remote.

Table 4.- Imports for consumption of jute manufactures into
the United States, 1935-47
(Million pounds)

	Burlap	Bags	Bagging		Webbing	Cordage	Other	Total
			New	Waste		etc.		
Average								
1935-39	527	40	22	44	3	1	4	641
1940	503	40	29	17	6	1/	2	597
1942	255	39	22	3	3	1/	1	323
1945	459	18	24	5	2	3	1	512
1946	557	27	15	8	9	8	1/	624
Annual rate								
1947, Jan. - Mar. . .	604	62	9	6	9	35	1	726
Apr. - June	408	38	12	7	7	12	1	485
Jul. - Aug.	673	21	14	8	2	1/	1	719

1/ Less than 500,000 pounds.

Compiled from Foreign Commerce Statistics of the United States.

BURLAP PRICE LOW AS COMPARED TO COTTON FABRIC

Prices of the most important burlap construction and the most important cotton fabric construction used in bags are compared in table 5. At present 40" 7-1/2 ounce burlap is about 9 cents cheaper per linear yard than 40" 3.75 cotton sheeting, as compared with 9.7 cents cheaper under the O.P.A. in October 1946, but only 0.2 cents per yard cheaper in prewar 1940. As indicated, 40" 7-1/2 ounce burlap is priced nearly three times as high as prewar.

Table 5.- Comparison of cotton 1/ and burlap 2/ fabrics prices, and spread between them, for the specified years

	Average Monthly Price					
	1940	October 1946	November 1946	March 1947	November 1947	January 5, 1948
	Cents	Cents	Cents	Cents	Cents	Cents
	per yard	per yard	per yard	per yard	per yard	per yard
Cotton fabric 1/ -						
40" 3.75 sheeting	5.9	18.1	21.0	26.0	22.5	25.8
Burlap 2/- 40" 7-1/2 ounce.	5.7	8.4	17.0	16.9	15.3	16.6
Spread between cotton and burlap fabrics. . . . .	.2	9.7	4.0	9.1	7.2	9.2

1/ Quotations from Journal of Commerce.

2/ Quotations from Daily Mill Stock Reporter.

INDIA'S JUTE ACREAGE NOW MOSTLY IN PAKISTAN BUT MILLS ARE IN INDIA

Only 28.8% of India's jute acreage as of 1945 is left in the Indian Union, the rest being in Pakistan. It is not known whether Pakistan will continue to back the Technological Research Laboratories of the Indian Central Jute Committee. The director, P. B. Sarker, argues that the laboratories should be maintained even if this support is not forthcoming (1) because some jute is grown in the India Union, (2) the field of research could be extended to other long fibers, (3) the laboratory might be able to develop cheap jute-cotton and jute-wool fabrics for wear by India's masses.

Indian Textile Journal, Oct. 1947, p. 12.

JUTE GROWING IN INDIA TO BE PROMOTED

The Indian Control Jute Committee has established five research centers for investigation into the economics of jute growing in the Dominion of India, in an effort to increase cultivation of jute in order to become independent of Pakistan.

Journal of Commerce, N.Y.

WYOMING TRYING TO SECURE WOOL PROCESSING PLANTS

A "committee of 25 Carbon County (Wyoming) sheepmen and businessmen" has been named to plan financing of a wool processing plant at Rawlins, Wyoming. Establishment of a wool processing plant in Rawlins, Wyoming was said to be feasible, practicable, and economically sound. He said several Boston Wool processors were "definitely interested in moving to Wyoming because of poor labor management conditions and overcrowding in the East, and lack of income taxes in Wyoming."

Daily News Record, Dec. 23, 1947, p. 3.

570,590 TONS OF PAPER WAS USED FOR SHIPPING SACKS IN 1947

A total of 570,590 tons of paper was used in the United States during the calendar year 1947 for the manufacture of paper shipping sacks, according to figures made available yesterday. During 1946, paper consumption for shipping

sacks totaled 550,374 tons. Thus, last year's consumption recorded a rise of 20,216 tons, or 3.6 percent. Back in 1942, or but five years ago, consumption of paper for shipping sack manufacture totaled only 250,591 tons. Thus, within the short period of five years, an increase of 128.0 percent - or more than double - has been registered.

Daily Mill Stock Reporter, Jan. 7, 1948, p. 2.

NEW OUTLETS FOR WET STRENGTH PAPER ENVISIONED

Bed sheets, bath mats that will resist repeated wetting, washable paper towels, impervious wrapping for wet meats and vegetables, outdoor advertising, etc., "offer an interesting new outlet to the country's paper mills" according to "government scientists at the National Bureau of Standards." "This new type of paper, made using a shorter beating cycle and by bonding with pine resin, was developed for maps during the war."

Chemurgic Digest, Nov. 30, 1947, p. 336.

TEXTILE RESEARCH NOTES

INDUSTRIAL RESEARCH EXPENDITURES CLIMB SLIGHTLY IN 1947

In 1947 American manufacturers spent 270% more on research than in 1939, 14% than in 1946. However, research expenditures comprised an average of only 1.6% of sales in 1947 as compared with 1.86% in 1939. These figures are based on a survey of 950 manufacturers, 750 of whom reported they had research programs, by the National Association of Manufacturers.

Journal of Commerce, Dec. 11, 1947, p.13.

RESEARCH IN SOUTH SURVEYED

The number of industrial research laboratories in the southern states has grown from 9 in 1920 to 129 in 1946, according to the Federal Reserve Bank of Atlanta. A survey recently made by Dr. Raymond B. Seymour, head of Industrial Research Foundation at the University of Chattanooga, indicated 330 privately-operated research laboratories in 13 southern states. Facilities operated by federal government, states, and privately are discussed in regard to organization and typical research projects. It is stated that the South did not fare so well on research projects during the war, with 10 large concerns holding 65% of Army-Navy contracts assigned to private laboratories, and with 12 large universities getting 48% of the \$20 million spent for research at this level.

In Old South, research emphasis is on cellulose (from cotton and wood), food processing, development of new products from oil-bearing crops. West of Mississippi emphasis is on hydrocarbons.

Mississippi and Alabama have no colleges granting Ph.D.'s in anything, Arkansas granted none and Florida only one between 1940-45. In 1946-47, only universities in Louisiana, two in North Carolina, one in Tennessee, and one in Virginia granted doctor's degrees in chemistry. Sometime ago a committee on graduate education in the South was formed with the idea of having different colleges specialize on particular subjects, but thus far the plan has not worked out. Increased production of scientists in the South is held to be needed.

"Industrial Research Has Come of Age In South,"
Daily News Record, Dec. 13, 1947, p. 4.

SHIRLEY INSTITUTE APPEALS FOR FUNDS

Address made at annual meeting of the British Cotton Industry Research Association indicates that income is not keeping pace with expenditure and unless more support is forthcoming, there is danger of losing the maximum government grant.

Textile Recorder, Nov. 1947, as excerpted in J. P. Stevens Abstracts.

GEORGIA TECH'S NEW TEXTILE BUILDING TO BE NAMED AFTER HIGHTOWER

The textile instructional and research building under construction at Georgia School of Technology will be named in honor of the late William Harrison Hightower, late president of Thomaston Cotton Mills.

Daily News Record, Dec. 29, 1947, p. 12.

COTTONSEED AND PEANUTS

U. S. FATS AND OILS OUTPUT TO BE LARGER THIS YEAR

Total output of fats and oils from domestic materials in the year beginning October 1947 probably will be moderately larger than a year earlier. Production of lard and of vegetable oils used chiefly in food products is likely to decline somewhat. Output of inedible tallow, greases, and other soap fats may be about as large as in 1946-47. Production of linseed oil will be substantially larger.

Domestic production of fats and oils in October-December 1947 was larger than a year earlier, mainly as a result of early marketing of hogs and unusually rapid crushing of 1947 oilcrops. But production in the first 9 months of 1948 may not be much larger than in the first 9 months of 1947. Lard output probably will be materially less than a year earlier because reduced corn supplies will induce farmers to market hogs at lighter weights. Also, the rapid crushing of oil-crops in the early part of the season will result in a greater than usual seasonal decline in output of vegetable oils next summer.

Demand and Price Situation, Dec. 1947, p. 9.

COCONUT OIL DECLINES; DOMESTIC OILSEED MEALS INCREASE IN PRICE

The price of coconut oil has dropped 4 cents per pound during the last month, but the price of cottonseed oil remained unchanged. Prices for domestic oilseed meals climbed substantially during the month.

Table 6.- Prices of vegetable oils and meals

	: January 5, 1948	: December 8, 1947	: October 6, 1947	: January 1947	: September 1946
	Cents per pound				
OILS 1/					
Cottonseed oil	28.0	28.0	24.0	28.8	12.5
Peanut oil	29.0	30.0	24.5	29.2	13.0
Soybean oil.	27.0	26.5	22.0	26.0	11.8
Corn oil	32.0	30.0	24.0	27.5	12.8
Coconut oil 2/	22.0	26.0	19.0	21.8	11.1
Linseed oil 3/	34.1	34.6	25.0	36.6	16.6
Tung oil 4/	27.5	28.3	25.0	39.5	39.0
	Dollars per ton				
MEALS 5/					
Cottonseed meal 6/	97.50	95.00	92.50	69.40	62.75
Peanut meal 7/	94.00	90.00	95.00	66.90	67.25
Soybean meal 8/	103.50	98.00	110.50	71.90	66.00
Coconut meal 9/	81.00	81.00	83.50	65.90	59.70
Linseed meal 10/	97.00	86.00	85.00	86.25	59.25

- 1/ Crude, tanks, f.o.b. mills except noted. From Oil, Paint and Drug Reporter (daily quotations) and from Fats and Oils Situation, BAE (monthly quotations).
- 2/ Crude, tanks, Pacific Coast.
- 3/ Raw, drums, carlots, N. Y.
- 4/ Drums, carlots, N.Y.
- 5/ Bagged carlots. As given in Feedstuffs (daily quotations) and Feed Situation, BAE (monthly quotations).
- 6/ 41 percent protein, Memphis.
- 7/ 45 percent protein, S. E. Mills.
- 8/ 41 percent protein, Chicago.
- 9/ 19 percent protein, Los Angeles.
- 10/ 32 percent protein, Minneapolis, *prior to May 1947; 34 percent protein after that date.*

COTTONSEED HULLS GIVE NEW PLASTIC COMPOUND

Research carried out at University of Tennessee experimental laboratories developed a new plastic compound from cottonseed hulls. Now it is reported National Plastics, Inc., of Knoxville, has gone into production of this new plastic, known as "Plastone." Capacity of the Tennessee commercial plant is 180,000 pounds monthly, and the company is preparing for a further expansion, according to George I. Whitlatch, of the Tennessee State Planning Commission. More than 4 million sheaves and idlers for textile mill looms already have been produced from this new thermosetting moulding powder with a phenol resin binder. Eventually, plastic producers may use 10 million pounds of cottonseed hulls per month in the new product on which patents are held by the University of Tennessee Research Corp.

IMPORTED CASEIN AT 30 CENTS PER POUND; ADEQUATE SUPPLY EXPECTED FOR 1948

An unprecedented world-wide demand for casein was developed and only one-third of the 25,000 tons exported from the Argentine during the first 10 months of 1947 came to the U. S., "in contrast to previous years when Argentina looked to this country as the best market." Domestic consumption of casein is said to have fallen off noticeably in the last few months because of high cost of imported casein. "To satisfy their needs some consumers have developed satisfactory substitutes for casein which has further lowered domestic casein consumption." Latest Argentine price quotation is 25-1/2 cents a pound f.o.b. Buenos Aires which makes delivered U. S. price about 30 cents per pound. These prices are under domestic casein prices which, however, are nominal at present because of low stocks. "Most consumers consider 30 cents a pound too high...However, when domestic production comes into full swing next spring, indications are that it will more than satisfy demand here and that prices will be more in line with domestic buying ideas.

Journal of Commerce, Jan. 3., 1948, p. 3.

LINTERS AND CELLULOSE

Purified linters price was 13.25 during November and December 1947. But on December 1, as stated in the previous issue of Survey Notes, dissolving wood pulp prices were raised \$7 and \$8 per ton. The increase represents a change in method of quoting rather than an actual price increase. Dissolving wood pulp prices are now quoted f.o.b. producing mill, full freight allowed.

Table 7.- Prices of dissolving wood pulp and purified linters
Cents per pound

	Wood pulp 1/				Purified linters 2/
	Standard	High-T.	Acetate		
	viscose	viscose	& cupra		
	grade	grade	grade		
1947, January	6.60	6.92	7.40		19.00
February	6.95	7.35	7.90		17.00
March	6.95	7.35	7.90		14.50
April	6.95	7.35	7.90		14.50
May	6.95	7.35	7.90		14.50
June	6.95	7.35	7.90		14.50
July	7.10	7.55	8.20		14.50
August	7.10	7.55	8.20		12.50
September	7.10	7.55	8.20		11.50
October	7.10	7.55	8.20		12.50
November	7.10	7.55	8.20		13.25
December	7.45	7.90	8.60		13.25

1/ Compiled from Rayon Organon and from letters to us from producer. Wood pulp prices are f.o.b. domestic producing mill, full freight allowed, and 3% transportation tax allowed Dec. 1, 1947 on; freight equalized with that Atlantic or Gulf port carrying lowest backhaul rate to destination plus 3% of backhaul charges, prior to December 1st.

2/ Compiled from letters to us from a producer. F.o.b. pulp plant.

SOURCE OF CELLULOSE OTHER THAN WOOD PULP PREDICTED

If wood pulp cellulose continues to rise in price, there is some chance that rayon manufacturers will find available a new source of cellulose at a lower cost as the result of research in 1948, Julius B. Goldberg, research director for J. P. Stevens & Co., Inc., told members of the American Association of Textile Technologists at their monthly meeting here last night. Short-cut methods for preparing a viscose solution ready for spinning may also be developed as a practical means of cutting yarn producers' costs, he added.

Journal of Commerce, Jan. 8, 1948, p. 14.

JUSTICE DEPARTMENT CHARGES THAT DUPONT HAS CELLOPHANE MONOPOLY

The Department of Justice has charged DuPont with violating the anti-trust laws in its manufacture of cellophane, alleging that "DuPont acquired and supported its monopoly through various cartel agreements allocating world markets between it and leading foreign cellophane manufacturers and providing for the exclusive interchange of technical information between DuPont and its co-conspirators." DuPont is said to have produced in excess of two-thirds of all the cellophane produced in this country and to have done \$46 million of the total gross sales of this product of \$62 million in 1946. DuPont replied that it had given licenses to other producers; that cellophane had had to compete with metal foils, waxed papers and other plastic films; that price has been reduced from \$2.65 a pound in 1923 to 42 cents a pound at present; and that the product's quality has been greatly improved.

Wall Street Journal, Dec. 15, 1947, p. 4.

M I S C E L L A N E O U S

GOODYEAR INTRODUCES PLASTIC FLOOR COVERING

Goodyear has announced the first of its new vinyl plastic products--floor covering--and will soon introduce vinyl films made from the same basic ingredients, designed for use in fabricating such items as draperies, garment bags, wearing apparel, and upholstery material. The flooring material is the result of several years of research and developmental work. The "vinyl" is said to have proved to be resistant to stain, scar and flame, while retaining the resilient and longer wearing qualities of rubber floor covering. Goodyear thus joins Goodrich's "Koroseal" and Firestone's "Velon" as one of Akron's "Big Three" rubber-makers producing plastic products.

Journal of Commerce, Dec. 23, 1947, p. 13.

FLAX ACREAGE IN TEXAS TO DOUBLE IN 1948

Flax acreage in Texas during the 1948 season will reach the 200,000 acre mark, compared with less than 100,000 acres last year, according to A. C. Dillman, manager of the Texas Flax Improvement Association, Kennedy, Texas. Production of flax is now completely mechanized and farmers have found it to be a crop that can be produced at minimum cost.

Daily News Record, Dec. 24, 1947, p. 11.

(The Crop Reporting Board shows 91,000 acres in flax in Texas in 1947 compared with 76,000 in 1946, and an average of 30,000 acres per year during 1936-45.)

